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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,511	12/03/2003	Wayne Nicholas Taylor	10-006	3763

23164 7590 10/15/2007

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EXAMINER	
GILLIS, BRIAN J	

ART UNIT	PAPER NUMBER
2141	

MAIL DATE	DELIVERY MODE
10/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/725,511	TAYLOR ET AL.	
	Examiner	Art Unit	
	Brian J. Gillis	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03032004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Stewart et al (US Patent #7,277,954).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

(Claim 1 discloses) a method in a multi-homed endpoint having multiple interfaces with respective Internet Protocol (IP) source addresses, the method including: first identifying source-destination address pairs available between the IP source addresses of the multi-homed endpoint and IP destination addresses available for reaching a multi-homed peer via an IP network (Stewart et al shows pairings between sources and destinations (figure 8).); initiating, for each source-destination address pair,

a metric for identifying successful data transfer between the corresponding IP source, address of the multi-homed endpoint and the corresponding IP destination address of the multi-homed peer (Stewart et al shows the source starts to communicate with the destination to determine acknowledgements in turn determining a success rate (column 5, lines 41-50).); and second identifying one of the source-destination address pairs having the corresponding metric indicating a highest successful data transfer relative to the other source-destination pairs (Stewart et al shows an optimal path is identified based on parameters (column 11, line 53 – column 12, line 5).); and selecting the interface having the IP source address associated with the identified one source-destination address pair, for transport of a message to the multi-homed peer (Stewart et al shows the optimal path is used (column 11, line 53 – column 12, line 5)).

(Claim 2 discloses) the method of claim 1, wherein the initiating step includes, for each source-destination address pair: incrementing a corresponding assigned counter in response to a determined absence of an acknowledgement within a prescribed time interval of sending a data frame via the corresponding source-destination address pair (Stewart et al shows a table is updated and incremented if an acknowledgement is not received (column 8, lines 41-52).); and decrementing the corresponding assigned counter, until reaching a zero value, for each acknowledgement detected within the corresponding prescribed time interval (Stewart et al shows a table is updated when an acknowledgement is received (column 8, lines 26-40)).

(Claim 3 discloses) the method of claim 2, wherein the second identifying step includes identifying the one source-destination address pair having the corresponding

assigned counter with a lowest counter value relative to the other assigned counters (Stewart et al shows the path with the lowest variance is selected (column 11, line 53 – column 12, line 5)).

(Claim 4 discloses) the method of claim 3, wherein the second identifying step further includes selecting, between the one source-destination address pair and a second source-destination address pair each having the lowest counter value, the one source-destination pair based on having a lower corresponding determined round trip time interval (Stewart et al shows using the round trip time to determine a path (column 7, lines 16-34)).

(Claim 5 discloses) the method of claim 3, wherein the initiating step includes periodically sending heartbeat data frames on each of unselected ones of the source-destination address pairs, other than the identified one source-destination address pair, having a corresponding nonzero value (Stewart et al shows a heartbeat message is sent to non-primary addresses (column 5, lines 21-28)).

(Claim 6 discloses) the method of claim 5, wherein the initiating step further includes sending the heartbeat data frames, during a detected idle interval, on a selected one of the source-destination address pairs according to a round robin sequence (Stewart et al shows the heartbeat messages are sent to associated addresses periodically (column 5, lines 21-28)).

(Claim 7 discloses) the method of claim 3, wherein the selecting step includes repeating the selecting step for each message to be output by the multi-homed endpoint

to the multi-homed peer (Stewart et al shows the selection process is used for multiple messages (figure 10)).

(Claim 8 discloses) the method of claim 1, wherein the selecting step includes repeating the selecting step for each message to be output by the multi-homed endpoint to the multi-homed peer (Stewart et al shows the selection process is used for multiple messages (figure 10)).

(Claim 9 discloses) a multi-homed endpoint comprising: a plurality of interfaces, having respective Internet Protocol (IP) source addresses, for connection with an IP network (Stewart et al shows multiple interfaces are connected (figure 4, reference #68, column 4, lines 15-22).); a first executable resource configured for identifying source-destination address pairs available between the IP source addresses and IP destination addresses available for reaching a multi-homed peer via the IP network, the first executable resource configured for initiating, for each source-destination address pair, a metric for identifying successful data transfer between the corresponding IP source address of the multi-homed endpoint and the corresponding IP destination address of the multi-homed peer (Stewart et al shows pairings between sources and destinations (figure 8) and the source starts to communicate with the destination to determine acknowledgements in turn determining a success rate (column 5, lines 41-50).); and a selection resource configured for identifying one of the source-destination address pairs having the corresponding metric indicating a highest successful data transfer relative to the other source-destination pairs, the selection resource configured for selecting the interface having the IP source address associated with the identified one source-

destination address pair, for transport of a message to the multi-homed peer (Stewart et al shows an optimal path is identified an used based on parameters (column 11, line 53 – column 12, line 5).)

(Claim 10 discloses) the endpoint of claim 9, wherein the first resource is configured for initiating a counter for each source-destination address pair, the first resource configured for: incrementing the counter for a corresponding source-destination address pair in response to a determined absence of an acknowledgement within a prescribed time interval of sending a data frame via the corresponding source-destination address pair (Stewart et al shows a table is updated and incremented if an acknowledgement is not received (column 8, lines 41-52).); and decrementing the counter for a corresponding source-destination address pair, until reaching a zero value, in response to each acknowledgement detected within the corresponding prescribed time interval (Stewart et al shows a table is updated when an acknowledgement is received (column 8, lines 26-40)).

(Claim 11 discloses) the endpoint of claim 10, wherein the selection resource is configured for selecting the one source-destination address pair having the corresponding counter with a lowest counter value relative to the other counters (Stewart et al shows the path with the lowest variance is selected (column 11, line 53 – column 12, line 5)).

(Claim 12 discloses) the endpoint of claim 11, wherein the selection resource is configured for selecting, between the one source-destination address pair and a second source-destination address pair each having the lowest counter value, the one source-

destination pair based on having a lower corresponding determined round trip time interval (Stewart et al shows using the round trip time to determine a path (column 7, lines 16-34)).

(Claim 13 discloses) the endpoint of claim 11, wherein the first executable resource is configured for periodically sending heartbeat data frames on each of unselected ones of the source-destination address pairs, other than the identified one source-destination address pair, having a corresponding nonzero value (Stewart et al shows a heartbeat message is sent to non-primary addresses (column 5, lines 21-28)).

(Claim 14 discloses) the endpoint of claim 13, wherein the first executable resource is further configured for sending second heartbeat data frames, during a detected idle interval, on a selected one of the source-destination address pairs according to a round robin sequence (Stewart et al shows the heartbeat messages are sent to associated addresses periodically (column 5, lines 21-28)).

(Claim 15 discloses) the endpoint of claim 11, wherein the selecting resource is configured for selecting a new interface, based on identifying the corresponding source-destination address pair having the corresponding metric indicating the highest successful data transfer relative to the other source-destination pairs, for each message to be output by the multi-homed endpoint to the multi-homed peer (Stewart et al shows the selection process is used for multiple messages (figure 10)).

(Claim 16 discloses) the method of claim 9, wherein the selecting resource is configured for selecting a new interface, based on identifying the corresponding source-destination address pair having the corresponding metric indicating the highest

successful data transfer relative to the other source-destination pairs, for each message to be output by the multi-homed endpoint to the multi-homed peer (Stewart et al shows the selection process is used for multiple messages (figure 10)).

(Claim 17 discloses) a computer readable medium having stored thereon sequences of instructions for sending a message by a multi-homed endpoint having multiple interfaces with respective Internet Protocol (IP) source addresses, the sequences of instructions including instructions for: first identifying source-destination address pairs available between the IP source addresses of the multi-homed endpoint and IP destination addresses available for reaching a multi-homed peer via an IP network (Stewart et al shows pairings between sources and destinations (figure 8).); initiating, for each source-destination address pair, a metric for identifying successful data transfer between the corresponding IP source address of the multi-homed endpoint and the corresponding IP destination address of the multi-homed peer (Stewart et al shows the source starts to communicate with the destination to determine acknowledgements in turn determining a success rate (column 5, lines 41-50).); and second identifying one of the source-destination address pairs having the corresponding metric indicating a highest successful data transfer relative to the other source-destination pairs (Stewart et al shows an optimal path is identified based on parameters (column 11, line 53 – column 12, line 5).); and selecting the interface having the IP source address associated with the identified one source-destination address pair, for transport of a message to the multi-homed peer (Stewart et al shows the optimal path is used (column 11, line 53 – column 12, line 5)).

(Claim 18 discloses) the medium of claim 17, wherein the initiating step includes, for each source-destination address pair: incrementing a corresponding assigned counter in response to a determined absence of an acknowledgement within a prescribed time interval of sending a data frame via the corresponding source-destination address pair (Stewart et al shows a table is updated and incremented if an acknowledgement is not received (column 8, lines 41-52).); and decrementing the corresponding assigned counter, until reaching a zero value, for each acknowledgement detected within the corresponding prescribed time interval (Stewart et al shows a table is updated when an acknowledgement is received (column 8, lines 26-40)).

(Claim 19 discloses) the medium of claim 18, wherein the second identifying step includes identifying the one source-destination address pair having the corresponding assigned counter with a lowest counter value relative to the other assigned counters (Stewart et al shows the path with the lowest variance is selected (column 11, line 53 – column 12, line 5)).

(Claim 20 discloses) the medium of claim 19, wherein the second identifying step further includes selecting, between the one source-destination address pair and a second source-destination address pair each having the lowest counter value, the one source-destination pair based on having a lower corresponding determined round trip time interval (Stewart et al shows using the round trip time to determine a path (column 7, lines 16-34)).

(Claim 21 discloses) the medium of claim 19, wherein the initiating step includes periodically sending heartbeat data frames on each of unselected ones of the source-

destination address pairs, other than the identified one source-destination address pair, having a corresponding nonzero value (Stewart et al shows a heartbeat message is sent to non-primary addresses (column 5, lines 21-28)).

(Claim 22 discloses) the medium of claim 21, wherein the initiating step further includes sending the heartbeat data frames, during a detected idle interval, on a selected one of the source-destination address pairs according to a round robin sequence (Stewart et al shows the heartbeat messages are sent to associated addresses periodically (column 5, lines 21-28)).

(Claim 23 discloses) the medium of claim 19, wherein the selecting step includes repeating the selecting step for each message to be output by the multi-homed endpoint to the multi-homed peer (Stewart et al shows the selection process is used for multiple messages (figure 10)).

(Claim 24 discloses) the medium of claim 17, wherein the selecting step includes repeating the selecting step for each message to be output by the multi-homed endpoint to the multi-homed peer (Stewart et al shows the selection process is used for multiple messages (figure 10)).

(Claim 25 discloses) a multi-homed endpoint comprising: multiple interfaces with respective Internet Protocol (IP) source addresses; first means for identifying source-destination address pairs available between the IP source addresses of the multi-homed endpoint and IP destination addresses available for reaching a multi-homed peer via an IP network (Stewart et al shows pairings between sources and destinations (figure 8).); means for initiating, for each source-destination address pair, a

metric for identifying successful data transfer between the corresponding IP source address of the multi-homed endpoint and the corresponding IP destination address of the multi-homed peer (Stewart et al shows the source starts to communicate with the destination to determine acknowledgements in turn determining a success rate (column 5, lines 41-50).); and second means for identifying one of the source-destination address pairs having the corresponding metric indicating a highest successful data transfer relative to the other source-destination pairs (Stewart et al shows an optimal path is identified based on parameters (column 11, line 53 – column 12, line 5).); and means for selecting the interface having the IP source address associated with the identified one source-destination address pair, for transport of a message to the multi-homed peer (Stewart et al shows the optimal path is used (column 11, line 53 – column 12, line 5)).

(Claim 26 discloses) the endpoint of claim 25, wherein the initiating means is configured, for each source-destination address pair, for: incrementing a corresponding assigned counter in response to a determined absence of an acknowledgement within a prescribed time interval of sending a data frame via the corresponding source-destination address pair (Stewart et al shows a table is updated and incremented if an acknowledgement is not received (column 8, lines 41-52).); and decrementing the corresponding assigned counter, until reaching a zero value, for each acknowledgement detected within the corresponding prescribed time interval (Stewart et al shows a table is updated when an acknowledgement is received (column 8, lines 26-40)).

(Claim 27 discloses) the endpoint of claim 26, wherein the second means for identifying is configured for identifying the one source-destination address pair having the corresponding assigned counter with a lowest counter value relative to the other assigned counters (Stewart et al shows the path with the lowest variance is selected (column 11, line 53 – column 12, line 5)).

(Claim 28 discloses) the endpoint of claim 27, wherein the second means for identifying further is configured for selecting, between the one source-destination address pair and a second source-destination address pair each having the lowest counter value, the one source-destination pair based on having a lower corresponding determined round trip time interval (Stewart et al shows using the round trip time to determine a path (column 7, lines 16-34)).

(Claim 29 discloses) the endpoint of claim 27, wherein the initiating means is configured for periodically sending heartbeat data frames on each of unselected ones of the source-destination address pairs, other than the identified one source-destination address pair, having a corresponding nonzero value (Stewart et al shows a heartbeat message is sent to non-primary addresses (column 5, lines 21-28)).

(Claim 30 discloses) the endpoint of claim 29, wherein the initiating means is configured for sending second heartbeat data frames, during a detected idle interval, on a selected one of the source-destination address pairs according to a round robin sequence (Stewart et al shows the heartbeat messages are sent to associated addresses periodically (column 5, lines 21-28)).

(Claim 31 discloses) the endpoint of claim 27, wherein the selecting means is configured for repeating the selection of a source IP address for each message to be output by the multi-homed endpoint to the multi-homed peer (Stewart et al shows the selection process is used for multiple messages (figure 10)).

(Claim 32 discloses) the endpoint of claim 25, wherein the selecting means is configured for repeating the selection of a source IP address for each message to be output by the multi-homed endpoint to the multi-homed peer (Stewart et al shows the selection process is used for multiple messages (figure 10)).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bryson et al (US Patent #7,068,598) teaches of an IP packet access gateway, which manages a path between communicating endpoints.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Gillis whose telephone number is 571-272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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